

Exhibit A



Basic Facts about Mold and Dampness

How common is mold in buildings?

Molds are very common in buildings and homes. Mold will grow in places with a lot of moisture, such as around leaks in roofs, windows, or pipes, or where there has been flooding. Mold grows well on paper products, cardboard, ceiling tiles, and wood products. Mold can also grow in dust, paints, wallpaper, insulation, drywall, carpet, fabric, and upholstery.

The most common indoor molds are *Cladosporium*, *Penicillium*, and *Aspergillus*. We do not have precise information about how often different molds are found in buildings and homes.

How do molds get in the indoor environment and how do they grow?

Mold is found both indoors and outdoors. Mold can enter your home through open doorways, windows, vents, and heating and air conditioning systems. Mold in the air outside can also attach itself to clothing, shoes, and pets can and be carried indoors. When mold spores drop on places where there is excessive moisture, such as where leakage may have occurred in roofs, pipes, walls, plant pots, or where there has been flooding, they will grow. Many building materials provide suitable nutrients that encourage mold to grow. Wet cellulose materials, including paper and paper products, cardboard, ceiling tiles, wood, and wood products, are particularly conducive for the growth of some molds. Other materials such as dust, paints, wallpaper, insulation materials, drywall, carpet, fabric, and upholstery, commonly support mold growth.

How do you know if you have a mold problem?

Large mold infestations can usually be seen or smelled.

How do molds affect people?

Exposure to damp and moldy environments may cause a variety of health effects, or none at all. Some people are sensitive to molds. For these people, exposure to molds can lead to symptoms such as stuffy nose, wheezing, and red or itchy eyes, or skin. Some people, such as those with allergies to molds or with [asthma](#), may have more intense reactions. Severe reactions may occur among workers exposed to large amounts of molds in occupational settings, such as farmers working around moldy hay. Severe reactions may include fever and shortness of breath.

In 2004 the Institute of Medicine (IOM) found there was sufficient evidence to link indoor exposure to mold with upper respiratory tract symptoms, cough, and wheeze in otherwise healthy people; with asthma symptoms in people with asthma; and with hypersensitivity pneumonitis in individuals susceptible to that immune-mediated condition.

In 2009, the World Health Organization issued additional guidance, the [WHO Guidelines for Indoor Air Quality: Dampness and Mould](#) [PDF – 2.65 MB] [Summary] [PDF – 167 KB]. Other recent studies have suggested a potential link of early mold exposure to development of asthma in some children, particularly among children who may be genetically susceptible to asthma development, and that selected interventions that improve housing conditions can reduce morbidity from asthma and respiratory allergies.

A link between other adverse health effects, such as [acute idiopathic pulmonary hemorrhage among infants](#), memory loss, or lethargy, and molds, including the mold *Stachybotrys chartarum* has not been proven. Further studies are needed to find out what causes acute idiopathic hemorrhage and other adverse health effects.

There is no blood test for mold. Some physicians can do allergy testing for possible allergies to mold, but no clinically proven tests can pinpoint when or where a particular mold exposure took place.

Who is most at risk for health problems associated with exposure to mold?

People with allergies may be more sensitive to molds. People with immune suppression or underlying lung disease are more susceptible to fungal infections. Individuals with chronic respiratory disease (e.g., chronic obstructive pulmonary disorder, asthma) may experience difficulty breathing. Individuals with immune suppression are at increased risk for infection from molds. If you or your family members have these conditions, a qualified medical clinician should be consulted for diagnosis and treatment.

How do you keep mold out of buildings and homes?

Inspect buildings for evidence of water damage and visible mold as part of routine building maintenance. Correct conditions causing mold growth (e.g., water leaks, condensation, infiltration, or flooding) to prevent mold growth.

Inside your home you can control mold growth by:

- Controlling humidity levels;
- Promptly fixing leaky roofs, windows, and pipes;
- Thoroughly cleaning and drying after flooding;
- Ventilating shower, laundry, and cooking areas.

Specific Recommendations:

- Keep humidity levels as low as you can—between 30% and 50%—all day long. An air conditioner or dehumidifier will help you keep the level low. Bear in mind that humidity levels change over the course of a day with changes in the moisture in the air and the air temperature, so you will need to check the humidity levels more than once a day.
- Use an air conditioner or a dehumidifier during humid months.
- Be sure your home has enough ventilation. Use exhaust fans which vent outside your home in the kitchen and bathroom. Make sure your clothes dryer vents outside your home.
- Fix any leaks in your home's roof, walls, or plumbing so mold does not have moisture to grow.
- Consider not using carpet in rooms or areas like bathrooms or basements that may have a lot of moisture.

How do you get the molds out of buildings, including homes, schools, and places of employment?

Mold growing in homes and buildings indicates that there is a problem with water or moisture. This is the first problem to address.

Remove moldy items from living areas. Once mold starts to grow in carpet, insulation, ceiling tiles, drywall, or wallboard, the only way to deal with the problem is by removal and replacement.

It is important to properly clean and dry the area as you can still have an allergic reaction to parts of the dead mold and mold contamination may recur if there is still a source of moisture.

Remove or replace carpets and upholstery that have been soaked and cannot be dried promptly.

Clean up and dry out your home thoroughly and quickly (within 24-48 hours) after any flooding. Dig out mud and dirt. Use a wet vacuum to remove remaining dirt. Scrub cleanable surfaces (such as wood, tile, stone) with soapy water and a bristle brush. Thoroughly clean all hard surfaces (such as flooring, molding, wood and metal furniture, countertops, and sinks) with

water and dish detergent. Dry surfaces quickly and thoroughly after cleaning. If you have a fan, air conditioner or dehumidifier that wasn't affected by flooding use it to help the surfaces dry after you finish cleaning.

Mold growth can be removed from hard surfaces with commercial products, soap and water, or a **bleach solution of no more than 1 cup (8 ounces) of bleach in 1 gallon of water** to kill mold on surfaces. Never mix bleach with ammonia or other household cleaners.

If you choose to use bleach to clean up mold:

- Never mix bleach with ammonia or other household cleaners. Mixing bleach with ammonia or other cleaning products will produce dangerous, toxic fumes.
- Open windows and doors to provide fresh air.
- Wear non-porous gloves and protective eye wear.
- Small areas (such as a shower, or an area the size of a door) can often be cleaned by residents, but larger areas might need more professional help. Always follow the manufacturer's instructions when using bleach or any other cleaning product.

If you have an extensive amount of mold and you do not think you can manage the cleanup on your own, you may want to contact a professional who has experience in cleaning mold in buildings and homes.

Are there any circumstances where people should vacate a home or other building because of mold?

These decisions have to be made individually. If you believe you are ill because of exposure to mold in a building, you should consult your physician to determine the appropriate action to take.

I found mold growing in my home; how do I test the mold?

If you can see or smell mold, a health risk may be present. You do not need to know the type of mold growing in your home, and CDC does not recommend or perform routine sampling for molds. No matter what type of mold is present, you should remove it. Since the effect of mold on people can vary greatly, either because of the amount or type of mold, you cannot rely on sampling and culturing to know your health risk.

A qualified environmental lab took samples of the mold in my home and gave me the results. Can CDC interpret these results?

Standards for judging what is an acceptable, tolerable or normal quantity of mold have not been established. Sampling for mold can be expensive, and standards for judging what is and what is not an acceptable quantity of mold have not been set. The best practice is to remove the mold and work to prevent future growth. If you do decide to pay for environmental sampling for molds, before the work starts, you should ask the consultants who will do the work to establish criteria for interpreting the test results. They should tell you in advance what they will do or what recommendations they will make based on the sampling results. The results of samples taken in your unique situation cannot be interpreted without physical inspection of the contaminated area or without considering the building's characteristics and the factors that led to the present condition.

I heard about “toxic molds” and “black molds” that grow in homes and other buildings. Should I be concerned about a serious health risk to me and my family?

There is always a little mold everywhere – in the air and on many surfaces.

Certain molds are toxigenic, meaning they can produce toxins (specifically "mycotoxins"). Hazards presented by molds that may produce mycotoxins should be considered the same as other common molds which can grow in your house. Not all fungi produce mycotoxins and even those that do will not do so under all surface or environmental conditions.

Mold growth, which often looks like spots, can be many different colors, and can smell musty. Color is not an indication of how dangerous a mold may be. Any mold should be removed and the moisture source that helped it grow should be removed.

There are very few reports that toxigenic molds found inside homes can cause unique or rare health conditions such as pulmonary hemorrhage or memory loss. These case reports are rare, and a causal link between the presence of the toxigenic mold and these conditions has not been proven.

Page last reviewed: August 11, 2020